

## ABSTRACT

A system and method that facilitate detection of direct memory access (DMA) corruption is provided. The system can mitigate DMA memory corruption in computer system(s) employing transaction-based DMA bus system(s) (*e.g.*, PCI Express).

5 DMA transaction(s) cannot normally be traced; however, in accordance with an aspect of the present invention, the system is extended to include an interface to specify “allowed” and/or “disallowed” memory range(s) for a DMA transaction. If a DMA transaction occurs in a disallowed range, then it is rejected and, optionally, an error is raised. Thus, the system of the present invention can facilitate detection of direct  
10 memory access transaction(s) that can, if permitted, cause memory corruption.

The system includes an access information data store (*e.g.*, access table) and a memory controller. The access information can include, for example, a source identifier, a memory range (*e.g.*, one or more contiguous memory address(es)) and access attribute(s) (*e.g.*, read access, read and write access, write access, no access permitted,  
15 *etc.*).